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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,975	12/29/2000	Charles Elkins	V199-1933	9062

7590
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11/21/2005

EXAMINER

PRONE, JASON D

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,975

Applicant(s)

ELKINS ET AL.

Examiner

Jason Prone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-17 and 19 is/are rejected.
7) ☒ Claim(s) 18,20 and 21 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4, 5, and 8 are objected to because of the following informalities: Due to the amendment introduced in claim 1, in claims 4 and 5, the phrase "at least one splitting element" should be replaced with "plurality of splitting elements". In claim 8, the phrase "torque moving element" should be replaced with "torque inducing element". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-10, 12-17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Sutton (4,648,298).

Claims 1, 2, and 4-8:

In regards to claim 1, Sutton discloses the same invention including an apparatus for separating (10) including a plurality of splitting elements positioned along one of the pre-scored planes (26 and 74), and at least one torque inducing element to mechanically force the multiple board onto the plurality of splitting elements without loading the plurality of electrical components (116).

In regards to claim 2, Sutton discloses a stabilizing element exerting a load on the surface of the array and thereby reducing board flex (150).

In regards to claims 4 and 5, Sutton discloses the splitting element is wedged shaped (26 and 74) and the splitting element is block shaped (26 and 74). The term block is defined as: a solid piece of something (Source: *WordNet* ® 2.0, © 2003 *Princeton University*). The blades are clearly a solid piece and are, therefore, a block.

In regards to claims 6 and 7, Sutton discloses a transport element for automatically aligning the pre-scored planes with the plurality of splitting elements (172) and the transport element includes a plurality of wheels (it is common knowledge that a robotic arm uses a plurality of gear wheels). Also, it is noted that all things are aligned at any given time.

In regards to claim 8, Sutton discloses the at least one torque inducing element is a pneumatic lever (112).

Claims 9, 10, and 12-15:

In regards to claim 9, Sutton discloses the same invention including an apparatus for separating (10) including at least one splitting element positioned along one of the pre-scored planes (74), at least one torque inducing element to mechanically force the multiple board onto the at least one splitting element without loading the plurality of electrical components (116), a transport element for automatically aligning the pre-scored planes with the at least one splitting element (172).

In regards to claim 10, Sutton discloses a stabilizing element exerting a load on the surface of the array and thereby reducing board flex (150).

In regards to claims 12 and 13, Sutton discloses the splitting element is wedged shaped (26 and 74) and the splitting element is block shaped (74). The term block is

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defined as: a solid piece of something (Source: *WordNet* ® 2.0, © 2003 Princeton University). The blades are clearly a solid piece and are, therefore, blocks.

In regards to claim 14, Sutton discloses the transport element includes a plurality of wheels (it is common knowledge that a robotic arm uses a plurality of gear wheels).

In regards to claim 15, Sutton discloses the at least one torque inducing element is a pneumatic lever (112).

Claims 16, 17, and 19:

In regards to claim 16, Sutton discloses the same invention including separating individual circuits boards from a multiple board array with pre-scored planes (32), aligning one of the pre-scored planes with a splitting element (172), inducing torque on the multiple board array such that the multiple board array is forced onto the splitting element and breaks (116).

In regards claim 17, Sutton discloses loading the surface of the multiple board array to reduce board flex (150).

In regards to claim 19, Sutton discloses repeating the positioning and torque inducing on each pre-scored plane (Fig. 4).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton in view of Deshet (4,856,399). Sutton discloses the invention including the stabilizing element comprises a plate element (150).

However, Sutton fails to disclose a plurality of spring elements. Deshet teaches a stabilizing element (3) with a plurality of spring elements (see Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Sutton with a stabilizing element including spring elements, as taught by Deshet, to provide the stabilizing element with some "give" to prevent the stabilizing element from damaging or cracking the work piece.

Response to Arguments

6. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments, with respect to claims 16, 17, and 19, filed 25 August 2005 have been fully considered but they are not persuasive. The Sutton patent stabilizes the work piece with items 34, 80, and 150 so the work piece does not move. When the work piece is to be split, item "116" forces the work piece down against item "74". The area to be split is receiving the force from item 116 while the outer edge is not receiving any force. The area to be split would receive a torque force due to the placement of item 116's force and the stabilized outer edge. This torque force may be minor but nonetheless still occurs. The argument with regards to component placement relative to the blades is not relevant since this placement is not claimed.

Allowable Subject Matter

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8. Claims 18, 20, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Abel et al., Zimmer et al., Sosnowski, Chen et al.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

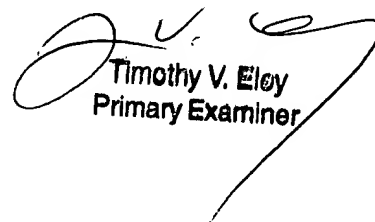
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is (571) 272-4513. The examiner can normally be reached on 7:30-5:00, Mon - (every other) Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP
November 15, 2005



Timothy V. Eley
Primary Examiner